

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claim 1. (Original) A stacked photovoltaic element comprising a plurality of unit photovoltaic elements each composed of a pn- or pin-junction, connected to each other in series, wherein a zinc oxide layer is provided at least one position between the unit photovoltaic elements, and the zinc oxide layer has resistivity varying in a thickness direction thereof, and wherein both surfaces of the zinc oxide layer are in contact with different unit photovoltaic elements, and a resistivity of the zinc oxide layer on the surface in contact with a unit photovoltaic element near a substrate as seen from the zinc oxide layer is higher than a resistivity of the zinc oxide layer on the surface in contact with a unit photovoltaic element farther from the substrate as seen from the zinc oxide layer.

Claim 2. (Original) The stacked photovoltaic element according to Claim 1, wherein zinc oxide of the zinc oxide layer on a side of being in contact with a p-layer of the pn- or pin-junction has a higher resistivity than that on a side of being in contact with an n-layer of the pn- or pin-junction.

Claim 3. (Original) The stacked photovoltaic element according to Claim 2, wherein a resistivity of the zinc oxide continuously decreases in the zinc oxide layer from a side

of the zinc oxide layer in contact with the p-layer towards a side of the zinc oxide layer in contact with the n-layer.

Claim 4. (Original) The stacked photovoltaic element according to Claim 1, wherein a resistivity of zinc oxide of the zinc oxide layer is 2100 μ cm or more but 5103 μ cm or less.

Claim 5. (Original) The stacked photovoltaic element according to Claim 1, wherein a high resistant portion of zinc oxide of the zinc oxide layer has 5102 μ cm or more but 5103 μ cm or less.

Claim 6. (Original) The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of amorphous Si:H.

Claim 7. (Original) The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of microcrystalline Si.

Claim 8. (Original) The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of single-crystalline or poly-crystalline Si.

Claims 9 - 11. (Canceled)

Claim 12. (Currently Amended) A method for producing a stacked photovoltaic element comprising an intermediate layer between photovoltaic elements each having a pn- or pin-junction, comprising the steps of:

stacking a first layer mainly composed of indium oxide on at least one interface with the photovoltaic element; and

stacking a second layer mainly composed of zinc oxide on and in direct contact with the first layer to form the intermediate layer, wherein the second layer is formed at a rate higher than that of the first layer.

Claim 13. (Currently Amended) A method for producing a stacked photovoltaic element comprising an intermediate layer between photovoltaic elements each having a pn- or pin-junction, comprising the steps of:

stacking a first layer mainly composed of indium oxide on at least one interface with the photovoltaic element; and

stacking a second layer mainly composed of zinc oxide on and in direct contact with the first layer to form the intermediate layer, wherein the second layer is formed at a temperature lower than that of the first layer.

Claims 14 - 17. (Canceled)